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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,233	12/08/2003	Fathi Hassan Ghorbel	1789-08603	2522

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EXAMINER

MCCARRY JR, ROBERT J

ART UNIT

PAPER NUMBER

3617

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/730,233	GHORBEL ET AL.	
	Examiner	Art Unit	
	Robert J. McCarry, Jr.	3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-10 and 20-23 is/are allowed.
- 6) ☒ Claim(s) 1, 3-6, 11-19, 24-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In view of the Appeal Brief filed on June 9, 2006, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 11, 12, 15-19 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Simpson et al (US 5,649,603).

Simpson et al discloses a device for traversing a conduit. The Examiner has relied on the embodiment shown in figure 9. The device is comprised of a first section 708, 712 having pitched wheels oriented such that each of their axles defines a pitch axle that is greater than zero degrees and less than ninety degrees. While the pitched wheel is not numbered in figure 9 it is clearly shown in figure 6. The wheel assembly 626 sits at an angle in relation to the longitudinal axis of the device. Since the wheels are not exactly neither parallel nor perpendicular to the device it is understood that they are situated at an angle greater than zero degrees but less than ninety degrees. A motor 702, installed in motor housing 704, causes the rotation of section 708, 712 in relation to a second section 720. The second section 720 is connected to the first section 708, 712 and has a plurality of wheels 716 aligned parallel to the longitudinal axis of the conduit. With the rotation of section 708, 712 the pitched wheels work to propel the vehicle through the conduit. Sets of pitched wheels are positioned at different points along the length of the vehicle. As shown in figure 9, there is a set of wheels on a first portion of section 708, 712 and another set on a second portion of section 708, 712. On each portion, the wheels are positioned at different points around the axis of the vehicle. The wheels are also positioned in the same azimuthal position about the vehicle. As shown in figure 9, the top wheel is in a mirrored position in respect to the bottom wheel. The entire set of wheels makes up a helical row around the vehicle and are equipped with wear resisting inserts 634 forming notched traction surfaces as

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shown in figure 6. The pitched wheels shown in figure 9 are shown to be positioned 180 degrees from each other. While claim 6 calls for the adjacent wheels to be 180 degrees apart, the Examiner has interpreted, based on dictionary definition, that the top and bottom pitched wheels are adjacent since they are close to one another and do not necessarily need to be next to each other to be adjacent. The device is further comprised of a fluid tube 718 for moving fluid through an internal passageway of the vehicle without the fluid having to pass between the outer diameter of the vehicle and the inner diameter of the conduit. The fluid through the tube 718 provides power to the hydraulic motor.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 14, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson et al (US 5,649,603) in view of Ng et al (US 6,162,171).

Simpson discloses a device for traversing a conduit as described above.

However, Simpson et al does not disclose the use of a plurality of optical encoders nor does Simpson et al disclose that the robot be no more than six inches in diameter. Ng et al discloses a robotic endoscope for performing procedures in tubular organs, mostly human organs. The device is comprised of a plurality of optical fibers to provide a light source and an imaging device to relay images of the interior of the organ. It would have

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been obvious to one of ordinary skill in the art to have applied the optical devices, like that of Ng et al to a device like that of Simpson et al in order to provide light to the interior of the conduit and to provide images back to the user of the device of the interior of the conduit so as to facilitate repairs. It also would have been obvious to one of ordinary skill to understand that in order for a device, like that of Ng et al to fit inside a human organ it would be no more than six inches in diameter and in most cases substantially smaller.

Allowable Subject Matter

Claims 7-10 and 20-23 are allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Molaug (US 5,749,397), McKay et al (US 6,035,786) and Comello et al (US 6,339,993) all disclose types of vehicle for moving through conduits.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. McCarry, Jr. whose telephone number is (571) 272-6683. The examiner can normally be reached on Monday through Friday 7:00am to 3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joseph Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert J. McCarry, Jr.
Examiner
Art Unit 3617

RJM
August 11, 2006



S. JOSEPH MORANO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600